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ABSTRACT

This paper measures the relationship between employment growth and employment opportunities for noncollege-educated males, examining variations across metropolitan areas in the living-wage employment ratio for prime-aged males with at most a high school education (less educated). Living-wage employment is full-time, year-round employment yielding annual earnings at or above the official poverty level for a family of four. Dividing the number of less-educated adult males employed in living-wage jobs by the total number of less-educated adult males creates the living-wage employment ratio. The paper examines whether metro areas with the same economic base have the same living-wage employment ratio for less-educated men; factors influencing variation across metropolitan areas in the living-wage employment ratio for these men; and racial differences in the living-wage employment ratio across and within metropolitan areas. Data come from the University of Minnesota's Integrated Public Use Microdata Sets for 1980 and 1990. Overall, economic growth alone has not been enough to keep living-wage employment opportunities for less-educated adult males from declining. Racial-ethnic inequality is a major problem among less-educated adult males. (Contains 16 references.) (SM)

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EARNING A LIVING WAGE: METRO DIFFERENCES IN OPPORTUNITY AND INEQUALITY FOR ADULT MALES WITH LOW EDUCATION LEVELS

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INTRODUCTION

Local and state economic development policymakers and practitioners have traditionally been concerned about promoting job growth. Much less attention, however, has been given to those who actually benefit from job growth or to the quality rather than the quantity of new jobs. It's clear that some localities and their residents benefit more from economic growth than others do. During the current economic expansion of the 1990s, many cities and towns continued to suffer under high unemployment and poverty rates.[1] However, some metropolitan areas do better than others do in translating employment growth into economic opportunities for low-income individuals. The differential impact and benefit of economic growth may be especially true for workers and job seekers with no more than a high school education.[2]. This paper will measure the relationship between employment growth and employment opportunities for non–college-educated males by examining variations across metropolitan areas in the living-wage employment ratio for prime-aged adult males (25–55 years old) with at most a high school education (less educated).

Living-wage employment is defined here as full-time, year-round employment (35-45 hours a week, at least 40 weeks a year) yielding annual earnings at or above the official poverty level for a family of four. Dividing the number of less-educated adult males employed in living-wage jobs by the total number of less-educated adult males results in a ratio—the living-wage employment ratio. Less-educated adult males were chosen because of the plausible view[3] that the falling economic status of less-educated men is a primary cause of a number of social problems as well as the decline of many inner-city, low-income communities.

The paper focuses on the following questions:

- Did metro areas with the same economic base have the same living-wage employment ratio for less-educated men?
- What factors influenced the variation across metropolitan areas in the living-wage employment ratio for less-educated adult males?
- Were there racial differences in the living-wage employment ratio across and within metropolitan areas?

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[1] In 1999, HUD published a report called "Now is the time: Places Left Behind in the New Economy." The report indicated that despite the robust economy of the 1990s, many cities around the country are experiencing above-average rates of both poverty and unemployment.

[2] See Houseman, 1995; and, Levy and Murnane, 1992.

[3] See Wilson, 1987.

- Did some metro areas have higher or lower rates of living-wage employment than would be expected given their economic base? And do such differences provide insight into institutional, policy, or programmatic variations across metro areas?

With respect to the last question, in particular, it is important to note that the descriptive analysis presented in this paper cannot provide definitive policy prescriptions, because it cannot address the causal relationships that underlie the findings. However, the statistical patterns do provide useful insights for policymakers, program planners, researchers, and practitioners as they search for promising ways to improve economic opportunity and alleviate poverty among the working poor.

The data set for the analysis was derived from the University of Minnesota's Integrated Public Use Microdata Series (IPUM) for 1980 and 1990. IPUMS consists of data on individual households and persons drawn from the censuses of 1850–1990. The data series contains almost all the detail originally recorded by the census. In order to protect confidentiality, no geographic areas smaller than 100,000 are identified. IPUMS was used to create a data sample of individual non-Hispanic white, African American (black) and Latino males 25–55 years old with no more than a high school education living in the 99 largest metro areas in the U.S.[4]

A Note on the Definition of a Living Wage

The decision to define a living wage as the official poverty level for a family of four can be criticized on several grounds. First, many view the official poverty level as too low for a family to achieve a minimally decent standard of living these days. As a result, it's possible to argue that the cutoff for a living wage should be set at 150 percent of the poverty level or even as high as 200 percent of the poverty level. The official poverty level was chosen as a conservative measure for this paper. Most people would agree that a decent job is one that at the very least enables a breadwinner to keep a family of four out of poverty as officially defined.

Second, wherever the earnings cutoff is set will be somewhat arbitrary, with families a bit above and a bit below being in essentially the same economic circumstances. Analysis requires specificity, however. Any numerical cutoff is no more arbitrary than any other in this sense is, because income is measured on a continuum.

Third and more fundamentally, a single national standard does not take into account differences in local costs of living. It seems fair to assume that the cost of living in New York City is different from that in Jackson, Mississippi, in which case a single earnings standard will understate a living wage in Jackson and overstate it in New York. Wider Opportunities for

[4] The database includes the 100 largest metro areas. However, of the 100 largest in the 1990 wave, only 99 overlapped with the 100 largest in the 1980 wave, reducing the number available for any 1980–1990 comparison to 99.

Women (WOW), a Washington, D.C.–based advocacy organization, has attempted to address this issue by developing a cost-of-living–based, self-sufficiency wage standard. This self-sufficiency wage is calculated by producing a minimum budget[5] for different family types that allows the family to maintain itself without public subsidies. The self-sufficiency wage is attractive conceptually. But it is difficult to use in quantitative comparative studies across multiple jurisdictions. In addition to being computationally complex, the fact that the data are derived from a mix of local, state, regional, and national sources makes it unclear that the resulting self-sufficiency wage does in fact provide unbiased comparisons across labor markets.[6] At least the direction of the regional bias in the national poverty standard is relatively clear.

Finally, the living-wage employment ratio used in this paper does conflate supply and demand. The ratio can rise (or fall) because the number of less-educated adult males falls (or rises). It can also increase if the number of living-wage jobs expands (or declines). As a result, the living-wage employment ratio must be interpreted with some care.

In general, the living-wage employment ratio is an easily understood indicator that despite its problems provides an insight into whether the probability of holding living-wage employment grew or deteriorated for less-educated adult males. While the ratio is not a perfect measure of job quality, because the paper examines metropolitan areas, it provides an indication of how employment opportunities have changed for less-educated adult males across different labor markets.

The remainder of this paper is divided into three sections. The next section analyzes the variations by metro area in the probability of less-educated males having living-wage employment, ranks metro areas by these probabilities, and uses a descriptive regression model to identify major factors contributing to these variations. The third section identifies and discusses metro areas with actual living-wage employment rates above (or below) their predicted values. The final section discusses implications and areas for further research.

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[5] The budget includes items that are often overlooked, such as childcare costs, health insurance, taxes, and savings. See Pearce and Brooks, 1999.

[6] It is important to state that despite these limitations, the self-sufficiency wage is an important and useful innovation for analysis within a specific labor market. It also seems that, with the proper resources, the problems associated with comparative studies could be addressed.

THE RELATIONSHIP BETWEEN METROPOLITAN EMPLOYMENT GROWTH AND LIVING-WAGE OPPORTUNITY FOR LESS-EDUCATED ADULT MALES

This section examines the relationship between living-wage employment and major socio-demographic, economic, and institutional factors at the metro area level. Three approaches are used. First, metro areas are ranked by their living-wage employment ratios and the share of total metropolitan employment available to less-educated adult males as living-wage employment. Second, regression analysis is used to identify systematic factors contributing to metro area variation in living-wage employment opportunities for less-educated males generally and for less-educated minority males in particular. Third, the analysis will be extended to examine racial differences in the living-wage employment ratio.

Ranking Metro Areas by Their Living-Wage Employment Ratios for Less-Educated Males

Metropolitan areas with similar employment per capita and employment growth do not have the same living-wage employment ratio or total employment available as living-wage employment for less-educated adult males.[7] These variations may be the result of a variety of structural economic, social, and demographic factors. However, some portion of the variation may be the result of unique institutional, policy, and programmatic innovations. This section will rank metropolitan areas by their 1990 living-wage employment ratio and the change in the ratio between 1980 and 1990. It will then rank metro areas by the share of employment held as living-wage employment by less-educated adult males.

The first column of table 1 ranks the top 15 and bottom 15 metro areas in descending order, using the living-wage employment ratios for less-educated males in 1990. The second and third columns, respectively, show an area's employment base (average employment per capita) over the 1980–1990 period and the rate of overall employment growth over the same period. The metro areas with the best living-wage employment ratios in 1990 were heavily concentrated in the Mideast region, the low performers in the Southern regions. There was a weak relationship between living-wage employment ratios and the employment base, but no clear relationship between living-wage employment in 1990 and 1980–1990 employment growth.

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[7] See Linneman and Summers, 1999 for discussion of differences in employment and population growth across 60 central cities and their metropolitan areas. Also, See Madden, 2000, for examination of variations in a variety of inequality measures at the metro level.

TABLE 1. 15 METRO AREAS WITH THE HIGHEST AND LOWEST LIVING-WAGE EMPLOYMENT RATIO FOR 1990 FOR LESS-EDUCATED ADULT MALES			
METRO AREAS	LIVING-WAGE EMPLOYMENT RATIO	AVERAGE EMPLOYMENT TO POPULATION	ANNUALIZED EMPLOYMENT GROWTH
Average	0.41	0.34	0.04
Top 15			
Harrisburg	0.53	0.32	0.06
Wichita	0.51	0.31	0.04
Minneapolis	0.51	0.35	0.05
Allentown	0.50	0.38	0.04
Wilmington	0.50	0.38	0.04
Worcester	0.50	0.28	0.04
Bridgeport	0.50	0.31	0.04
York	0.50	0.43	0.04
St. Louis	0.49	0.30	0.03
New Haven	0.48	0.30	0.05
Augusta	0.48	0.30	0.05
Albany	0.48	0.31	0.03
Seattle	0.48	0.36	0.05
Milwaukee	0.48	0.33	0.03
Lansing	0.48	0.31	0.02
Bottom 15			
Tucson	0.35	0.29	0.05
Ft. Lauderdale	0.35	0.31	0.05
Melbourne	0.34	0.30	0.07
Tampa	0.34	0.29	0.06
New Orleans	0.33	0.28	0.02
Stockton	0.33	0.27	0.05
Lakeland	0.32	0.29	0.04
Bakersfield	0.32	0.28	0.06
Austin	0.31	0.31	0.07
Albuquerque	0.31	0.27	0.04
San Antonio	0.31	0.28	0.05
Miami	0.30	0.30	0.03
Fresno	0.30	0.24	0.04
Jackson	0.28	0.30	0.04
El Paso	0.28	0.25	0.05

Table 2 shows the same comparison for a more dynamic measure of living-wage employment—the change in a metro area's living-wage employment ratio between 1980 and 1990. While the metro areas with the best relative growth rates in living-wage employment for less-educated adult males were again concentrated in the Mideast region there was also strong representation in the Great Lakes and Plains regions. Metro areas with the smallest growth rates, as before, were concentrated in the South. As in table 1, there is a weak relationship

between living-wage employment and the 1980–1990 employment base but no clear pattern with respect to employment growth.

TABLE 2. 15 METRO AREAS WITH THE HIGHEST AND LOWEST CHANGE IN LIVING-WAGE EMPLOYMENT RATIO FROM 1980 - 1990 FOR LESS-EDUCATED ADULT MALES

METRO AREAS	LIVING-WAGE EMPLOYMENT RATIO 1980-1990	AVERAGE EMPLOYMENT TO POPULATION	ANNUALIZED EMPLOYMENT GROWTH
Average	-0.02	0.34	0.04
Top 15			
Augusta	0.00	0.30	0.05
Worcester	0.00	0.28	0.04
Orlando	0.00	0.30	0.08
Lansing	0.00	0.31	0.02
Wichita	-0.01	0.31	0.04
Lancaster	-0.01	0.34	0.05
Melbourne	-0.01	0.30	0.07
Harrisburg	-0.01	0.32	0.06
Indianapolis	-0.01	0.30	0.04
Cincinnati	-0.01	0.30	0.04
New Haven	-0.01	0.30	0.05
Charlotte	-0.01	0.33	0.08
Bridgeport	-0.01	0.31	0.04
York	-0.01	0.43	0.04
West Palm Beach	-0.01	0.28	0.07
Bottom 15			
Jacksonville	-0.03	0.28	0.03
Dallas	-0.03	0.52	0.05
Stockton	-0.03	0.27	0.05
Lakeland	-0.03	0.29	0.04
Birmingham	-0.03	0.32	0.04
Tucson	-0.03	0.29	0.05
Charleston	-0.04	0.93	0.05
Miami	-0.04	0.30	0.03
Houston	-0.04	0.37	0.03
Pittsburgh	-0.04	0.26	0.02
Albuquerque	-0.04	0.27	0.04
San Antonio	-0.04	0.28	0.05
Jackson	-0.05	0.30	0.04
Austin	-0.05	0.31	0.07
El Paso	-0.05	0.25	0.05

The living-wage employment ratio measures the probability that a less-educated adult male is employed full-time and earns wages high enough to keep a family of four out of poverty. As such it measures both the impact of changes in supply and changes in demand. However, it is also useful to examine how much of the total employment in a metropolitan area is available as living-wage employment for less-educated adult males. Direct comparisons between a metro

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area's living-wage employment and its employment base are shown in tables 3 and 4. This living-wage employment share is compared with changes in labor supply as measured by the total population of less-educated adult males. In this case, by holding supply constant, these tables allow metro areas to be compared by the labor market demand for less-educated adult males.

The first column of table 3 shows the top and bottom 15 largest metro areas (of the 99) ranked in descending order by their living-wage employment share index. This index is defined as the number of living-wage jobs for less-educated males for every 10 jobs in the metro area. Column 2 presents the relative size of the less-educated population for 1990 compared with the average for all metro areas in the sample, and column 3 gives the annualized change in the less-educated adult male population between 1980 and 1990.

Metro areas vary widely in this index. Harrisburg, Pennsylvania (the top metro area), for example, had 1.6 living-wage jobs for less-educated adult males for every 10 jobs—almost three times as many as Austin, Texas, at the bottom, with .6 for every 10 jobs. That is, Harrisburg had almost three times as many living-wage employment opportunities for less-educated adult males as Austin after controlling for the size of the job base. The top metro areas were again concentrated in the Mideast. The bottom areas were in the Southwest and Far West of the country. Table 3 also indicates that metro areas with the same or similar labor supply (size of less-educated adult male population) often have different labor market demand for less-educated males.[8]

TABLE 3. 1990 LIVING-WAGE EMPLOYMENT SHARE FOR TOP AND BOTTOM 15 METRO AREAS

METRO AREAS	LIVING-WAGE EMPLOYMENT SHARE INDEX	1990 LESS-EDUCATED ADULT MALES POPULATION[9] RATIO	ANNUALIZED POPULATION GROWTH 1980–1990 (PCT.)
Average	1.0	1.0	0.04%
Top 15			
Harrisburg	1.6	0.5	2.9%

[8] There is a negative, but weak, association with the index and the population ratio. There is a slightly stronger, but still modest negative relationship between the living-wage share index and the change in population. This suggests that metro areas with larger less-educated populations have a slight tendency to have fewer good jobs available for less-educated adult males. However, this supply impact on the availability of good jobs for less-educated adult males seems to be very modest at best. The population ratio and the change in population explain roughly 1 percent and 6 percent, respectively, of the variation across metro areas in the living-wage employment share index.

[9] Population refers to the population of less-educated adult males. The less-educated adult male population in each metro area is divided by the average for the sample.

TABLE 3. 1990 LIVING-WAGE EMPLOYMENT SHARE FOR TOP AND BOTTOM 15 METRO AREAS			
METRO AREAS	LIVING-WAGE EMPLOYMENT SHARE INDEX	1990 LESS-EDUCATED ADULT MALES POPULATION[9] RATIO	ANNUALIZED POPULATION GROWTH 1980–1990 (PCT.)
Allentown	1.6	0.6	1.2%
York	1.5	0.4	0.5%
Lancaster	1.5	0.4	1.4%
Canton	1.5	0.3	-1.4%
Johnson City	1.5	0.4	0.0%
Augusta	1.4	0.3	2.0%
Youngstown	1.4	0.4	-0.7%
Louisville	1.3	0.8	0.1%
Wilmington	1.3	0.4	0.2%
Greensboro	1.3	0.8	1.9%
Toledo	1.2	0.4	-4.3%
Worcester	1.2	0.3	0.3%
Buffalo	1.2	0.8	-1.5%
Springfield	1.2	0.4	-0.3%
Bottom 15			
Melbourne	0.8	0.2	4.6%
Phoenix	0.8	1.2	2.4%
Seattle	0.7	1.0	0.2%
Washington	0.7	1.9	1.0%
Tucson	0.7	0.4	0.8%
Ventura	0.7	0.4	1.9%
Denver	0.7	1.0	-0.3%
San Diego	0.7	1.4	4.0%
Sacramento	0.7	0.7	2.1%
Raleigh	0.7	0.4	2.3%
Albuquerque	0.7	0.3	0.9%
San Francisco	0.7	2.0	0.5%
Jackson	0.7	0.2	2.8%
San Jose	0.7	0.7	0.5%
Austin	0.6	0.4	3.9%

Table 4, column 1, shows the living-wage employment share index for the 1980–1990 change in living-wage employment. The negative numbers indicate that the living-wage employment share declined in every metro area in the top 15 and bottom 15. However, the decline was much less severe in some metro areas than in others. Augusta, Georgia (the top metro area on this index) saw its living-wage employment share fall by 3.3 percent on an annualized basis between 1980 and 1990. This is considerably less than half as much as the fall in Charleston, South Carolina, which averaged 8.2 percent a year.

Just as in table 4, metro areas with similar changes in labor supply often had different changes in labor market demand for less-educated males in living-wage employment. As a result, it appears that changes in supply explain only a modest level of the variation across

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metro areas in the share of employment available to less-educated adult males as living-wage employment.[10] Finally, there appears to be some regional influence on the living-wage employment share index. The top metro areas were concentrated to some extent in the Southeast, while the bottom metro areas were in the Southwest and West.

TABLE 4. 1980–1990 CHANGE IN LIVING-WAGE EMPLOYMENT SHARE BY TOP AND BOTTOM 15 METRO AREAS

METRO AREAS	CHANGE IN LIVING-WAGE EMPLOYMENT SHARE INDEX 1980–1990	1990 LESS-EDUCATED MALE POPULATION	ANNUALIZED CHANGE IN POPULATION 1980–1990
Average	-5.8%	1.0	0.04%
Top 15			
Augusta	-3.3%	0.3	2.0%
Harrisburg	-3.8%	0.5	2.9%
New Haven	-3.8%	0.3	2.2%
Melbourne	-3.9%	0.2	4.6%
Lancaster	-4.0%	0.4	1.4%
Bakersfield	-4.1%	0.4	4.1%
Allentown	-4.1%	0.6	1.2%
Worcester	-4.3%	0.3	0.3%
Riverside	-4.5%	1.8	5.4%
West Palm Beach	-4.5%	0.5	3.8%
Orlando	-4.5%	0.8	4.2%
Springfield	-4.6%	0.4	-0.3%
Greensboro	-4.6%	0.8	1.9%
Bridgeport	-4.6%	0.3	0.5%
Ventura	-4.7%	0.4	1.9%
Bottom 15			
Chattanooga	-6.7%	0.3	-1.3%
Denver	-6.8%	1.0	-0.3%
Dallas	-6.9%	2.5	1.6%
Lakeland	-6.9%	0.3	0.6%
Salt Lake City	-7.0%	0.5	0.0%
Portland	-7.1%	0.8	-0.2%
Grand Rapids	-7.1%	0.4	-0.5%
Raleigh	-7.2%	0.4	2.3%
Akron	-7.3%	0.5	-1.6%
San Antonio	-7.6%	0.8	1.9%

[10] Correlation analysis reveals there is no relationship between the change in the living-wage employment share index and the population ratio. On the other hand, there is a modest positive association between the index and the change in population. Metro areas with growing less-educated populations had slightly higher increases in the living-wage employment share index between 1980 and 1990. However, population growth explains only about 6 percent of the variation in the index—a modest impact at best.

TABLE 4. 1980–1990 CHANGE IN LIVING-WAGE EMPLOYMENT SHARE BY TOP AND BOTTOM 15 METRO AREAS			
METRO AREAS	CHANGE IN LIVING-WAGE EMPLOYMENT SHARE INDEX 1980–1990	1990 LESS-EDUCATED MALE POPULATION	ANNUALIZED CHANGE IN POPULATION 1980–1990
Albuquerque	-7.8%	0.3	0.9%
Tucson	-7.9%	0.4	0.8%
Pittsburgh	-8.0%	1.5	-1.6%
Austin	-8.1%	0.4	3.9%
Charleston	-8.2%	0.4	1.4%

Tables 1 and 2 show that metro areas with similar employment growth and employment bases do not always have similar living-wage employment rates. Tables 3 and 4 indicate that very little of the variation across metro areas in the availability of living-wage employment for less-educated adult males is explained by controlling for labor market supply. What then explains the variations in living-wage employment opportunity for less-educated adult males across metropolitan areas?

Explaining Variations in Living-Wage Employment Opportunity

In order to explain why similar levels of employment produced very different levels of living-wage employment across metro areas, a multiple regression model was developed to identify the separate contributions of a series of economic and demographic variables to explaining variations in living-wage employment across metro areas. "Explain" is used here in a statistical sense—indicating factors that are systematically related to variations in the probability of a less-educated male holding living-wage employment in a metro area. The model does not address the underlying causal factors that produce a certain level of living-wage employment in a metro labor market.

The focus of the analysis (the dependent variable) is on the living-wage employment ratio for 1990 and the change in the living-wage employment ratio between 1980 and 1990. The explanatory factors (independent variables) included in the model are:

- average manufacturing employment over the decade,
- union penetration,
- average employment ratio over the decade,
- growth in manufacturing employment,
- growth in total employment,
- growth in the less-educated male population,

- less-educated adult minority male population as a share of total less-educated adult male population for 1990,
- annualized change in the metro area's population over the decade, and
- variables that represent region-specific factors. (The impact for each region is estimated in relation to the impact for the Far West, the reference region in the analysis.)[11]

Table 5 presents the regression results for both forms of the living-wage employment ratio. P-values of .10 or below are considered statistically significant. Columns 1 and 2 show the coefficients for the explanatory variables for the 1990 living-wage employment ratio and their P-values.[12] Employment growth and the average employment-to-population ratio (which measures labor market tightness) are both significant predictors. A 10 percent increase in either is predicted to increase the living-wage employment ratio in a metro area by about 1 percentage point. Interestingly, the average manufacturing share of total employment, union membership, and the change in manufacturing employment are not significant.[13] Annual growth in the less-educated male population and the number of less-educated minority males in 1990 had significantly negative impacts. Region of the country also makes a difference in the 1990 probability of holding living-wage employment. Metro areas in New England, the Mideast, and the Plains have higher living-wage employment ratios than does the Far West.

TABLE 5. REGRESSION RESULTS FOR 1990 LIVING-WAGE EMPLOYMENT RATIO

	LIVING-WAGE EMPLOYMENT RATIO 1990		LIVING-WAGE EMPLOYMENT CHANGE 1980–1990	
VARIABLES	COEFFICIENTS	P-VALUE	COEFFICIENTS	P-VALUE
Intercept	0.457	0.000	-0.006	0.685
Avg. Manufacturing Share	0.106	0.110	0.007	0.625
Union/Membership	-0.008	0.938	-0.017	0.426
Annual Growth in Less-Educated Adult Males	-0.897	0.023	-0.282	0.001

[11] See table A-1 for full description of control variables and hypothesis tests.

[12] The model explains about 66 percent of the variation in the dependent variable. It also has a regression error less than 10 percent of the dependent variable mean as well as an F-statistic significant at the 1-percent level. These three statistics indicate that the model fits the data fairly well.

[13] While a simple correlation analysis indicated a modest statistical relationship between each of these factors and the living-wage employment ratio in 1990, the relationship disappears after controlling for the other explanatory variables.

TABLE 5. REGRESSION RESULTS FOR 1990 LIVING-WAGE EMPLOYMENT RATIO

	LIVING-WAGE EMPLOYMENT RATIO 1990		LIVING-WAGE EMPLOYMENT CHANGE 1980–1990	
VARIABLES	COEFFICIENTS	P-VALUE	COEFFICIENTS	P-VALUE
Annual Pop. Growth	-0.670	0.001	-0.142	0.001
Employment Growth	1.085	0.003	0.340	0.000
Avg. Employment-to-Population	0.206	0.012	0.024	0.151
Annual Growth in Manufacturing Employment	-0.135	0.693	0.011	0.874
Total Less-Educated Minority Males, 1990	-0.075	0.009	-0.007	0.239
Regional Dummies				
New England	0.050	0.010	0.009	0.024
Mideast	0.042	0.013	0.003	0.342
Great Lakes	0.022	0.181	0.004	0.215
Plains	0.049	0.007	0.002	0.629
Southeast	-0.013	0.440	-0.002	0.536
Southwest	-0.021	0.236	-0.010	0.010
Adjusted R Square	0.658		0.465	
Standard Error	0.035		0.007	
F-statistic	14.186	0.000	6.957	0.000

Columns 3 and 4 in table 5 present the results for the annualized change in living-wage employment probability for less-educated males between 1980 and 1990.[14] Of the five statistically significant explanatory variables for the 1990 living-wage employment probability, only three are statistically significant predictors of the 1980–1990 change in probability formulation: annual growth in the less-educated adult male population, annual population growth, and employment growth.

Factors related to region of the country are again important in determining changes in a metro area's probability of providing living-wage employment for less-educated adult males. Metro areas in New England experienced relatively greater improvements in the probability of less-educated adult males holding living-wage employment than metro areas in the Far West. The Southwest, in contrast, experienced relatively smaller ones.

[14] The model explains a respectable 47 percent of the variance. Its F-statistic is significant at the 1 percent level. However, the regression error is large (about 35 percent of the dependent variable mean).

The results of the regression describe a scenario with the following major features. First, other things equal, fast-growing metro areas with large employment bases provide greater opportunities for living-wage employment. Second, the share of employment in manufacturing did not make a significant difference. Neither did a high rate of manufacturing growth increase the probability of living-wage employment for less-educated males. Third, metro areas with growing populations, both of less-educated adult males and overall, experienced lower probabilities of living-wage employment for less-educated males. Thus, population growth, other things being equal, increases competition for scarce employment opportunities in the labor market. Fourth, metro areas with relatively large less-educated adult minority male populations tended to have lower probabilities that members of this group would hold living-wage employment. Region of the country also mattered—important because these variables reflect region-specific institutional, policy, and sociodemographic factors.

Explaining Racial Differences in Living-Wage Employment

The regression results indicate that the larger the number of minority males (African American and Hispanic American), the lower a metropolitan area's living-wage employment ratio. This suggests that minority males may have had lower living-wage employment ratios compared with non-Hispanic white males. We now examine the impact of African American–white inequality on the probability of less-educated males holding living-wage employment.[15]

The 15 metro areas with the largest racial gaps in the 1990 living-wage employment ratio and the 15 with the smallest are shown in descending order in table 6. Using less-educated white males as the reference group, the table presents a racial disparity index. A value of 1 indicates that African American males have the same probability of holding living-wage employment as comparable white males. On the other hand, a value greater than (or less than) one indicates that African American males have a smaller (or greater) opportunity of living-wage employment than similar white males. Table 6 illustrates that metro areas with racial disparity indexes closer to one (i.e. those with the smallest racial gaps) were heavily concentrated in the Southeast and Southwest regions of the country. Metro areas with large racial disparity indexes (i.e., those with large racial gaps) were less heavily concentrated by region, although the Far West had more than its proportional share.

[15] Because of sampling problems, the analysis only examines differences between less-educated white and black males. While there were similar gaps between white and Latino males, the number of metro areas with Latino sample populations large enough to make statistically reliable conclusions was only about half of the original metro area sample.

TABLE 6. 15 METRO AREAS WITH THE SMALLEST AND LARGEST WHITE-BLACK GAP IN THE PROBABILITY OF HOLDING LIVING-WAGE EMPLOYMENT IN 1990 FOR LESS-EDUCATED ADULT MALES

METRO AREAS	WHITE-BLACK GAP IN LIVING-WAGE EMPLOYMENT	WHITE LIVING-WAGE EMPLOYMENT RATIO	AVERAGE EMPLOYMENT TO POPULATION	EMPLOYMENT GROWTH
AVERAGE	1.37	0.45	0.34	0.04
Top 15				
Albuquerque	0.50	0.33	0.27	0.04
Bridgeport	0.68	0.49	0.31	0.04
El Paso	0.88	0.29	0.25	0.05
Las Vegas	0.90	0.46	0.31	0.07
Worcester	0.94	0.51	0.28	0.04
Providence	0.94	0.41	0.27	0.00
Grand Rapids	1.03	0.47	0.23	0.05
Phoenix	1.04	0.40	0.30	0.07
Lansing	1.05	0.49	0.31	0.02
Toledo	1.05	0.45	0.33	0.00
Canton	1.06	0.46	0.30	0.03
Raleigh	1.06	0.41	0.31	0.07
Springfield	1.06	0.46	0.28	0.02
Allentown	1.10	0.52	0.38	0.04
Charleston	1.12	0.37	0.33	0.05
Bottom 15				
San Francisco	1.87	0.45	0.30	0.04
Melbourne	1.88	0.36	0.30	0.07
Pittsburgh	1.88	0.41	0.26	0.02
Tucson	1.91	0.36	0.29	0.05
Fresno	2.06	0.40	0.24	0.04
Tacoma	2.08	0.48	0.31	0.06
Milwaukee	2.22	0.53	0.33	0.03
Kansas City	2.22	0.48	0.31	0.04
Sacramento	2.53	0.42	0.33	0.06
Minneapolis	2.57	0.52	0.35	0.05
Youngstown	2.59	0.44	0.23	0.01
Salt Lake City	2.83	0.43	0.30	0.04
Wichita	4.16	0.52	0.31	0.04
Stockton	5.38	0.38	0.27	0.05
Des Moines	6.43	0.48	0.34	0.05

Table 7 presents the change in the racial disparity index between 1980 and 1990. The results are very similar, with metro rankings very close to those in table 6. Both white and African American less-educated males lost ground over the 1980–1990 period in their probability of holding living-wage employment. However, African Americans lost more.

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TABLE 7. 15 METRO AREAS WITH THE SMALLEST AND LARGEST ANNUALIZED CHANGE IN THE WHITE-BLACK GAP IN THE PROBABILITY OF HOLDING LIVING-WAGE EMPLOYMENT BETWEEN 1980 AND 1990 FOR LESS-EDUCATED ADULT MALES

METRO AREAS	CHANGE IN LIVING-WAGE WHITE-BLACK GAP IN LIVING-WAGE EMPLOYMENT RATIO	CHANGE IN WHITE LIVING-WAGE EMPLOYMENT RATIO	AVERAGE EMPLOYMENT TO POPULATION	EMPLOYMENT GROWTH
AVERAGE	0.02	-0.02	0.34	0.04
Top 15				
Phoenix	-0.06	-0.02	0.30	0.07
El Paso	-0.05	-0.06	0.25	0.05
Raleigh	-0.04	-0.04	0.31	0.07
Charleston	-0.04	-0.05	0.33	0.05
Providence	-0.03	-0.02	0.27	0.00
Bridgeport	-0.03	-0.01	0.31	0.04
Lakeland	-0.03	-0.04	0.29	0.04
Knoxville	-0.03	-0.03	0.31	0.06
Worcester	-0.03	0.00	0.28	0.04
Toledo	-0.02	-0.02	0.33	0.00
Miami	-0.02	-0.03	0.30	0.03
Springfield	-0.02	-0.02	0.28	0.02
Omaha	-0.02	-0.02	0.32	0.03
Albuquerque	-0.01	-0.03	0.27	0.04
San Diego	-0.01	-0.02	0.31	0.06
Bottom 15				
Harrisburg	0.05	-0.01	0.32	0.06
York	0.06	-0.01	0.43	0.04
Sacramento	0.06	-0.01	0.33	0.06
Youngstown	0.07	-0.03	0.23	0.01
Tacoma	0.07	-0.02	0.31	0.06
Fresno	0.07	-0.01	0.24	0.04
Minneapolis	0.07	-0.02	0.35	0.05
Melbourne	0.07	0.00	0.30	0.07
Milwaukee	0.08	-0.01	0.33	0.03
Tucson	0.09	-0.03	0.29	0.05
Kansas City	0.09	-0.02	0.31	0.04
Stockton	0.15	-0.03	0.27	0.05
Wichita	0.15	0.00	0.31	0.04
Salt Lake City	0.15	-0.03	0.30	0.04
Des Moines	0.19	-0.02	0.34	0.05

To determine what factors are related to differences in racial access to living-wage employment, separate regressions are estimated for white and African American males. The regression models use the same two formulations of the living-wage employment ratio and the same economic and demographic explanatory variables as used in the regression analysis presented above.

The results for the 1990 probability of holding living-wage employment appear in table 8.[16] For white less-educated males, neither growth in manufacturing employment nor the level of union membership made a significant contribution to the probability of holding living-wage employment for less-educated adult white males. Employment growth and the average employment-to-population ratio increased the probability of holding living-wage employment. Growth in the less-educated adult male population and in the population generally decreased that probability. Once again, regional location matters. Metro areas in the Mideast and Plains regions had higher and the Southwest lower probabilities of living-wage employment for white males than the Far West.

For African American less-educated males, growth in manufacturing employment significantly improved the probability of living-wage employment and population growth reduced it. Region of the country again makes a difference. African American males living in metro areas in New England, the Mideast, and the Great Lakes had higher probabilities of holding living-wage employment than similar males residing in metro areas in the Far West.

TABLE 8. REGRESSION RESULTS

VARIABLES	WHITE LIVING-WAGE EMPLOYMENT RATIO 1990		BLACK LIVING-WAGE EMPLOYMENT RATIO 1990	
	COEFFICIENTS	P-VALUE	COEFFICIENTS	P-VALUE
Intercept	0.484	0.00	0.357	0.04
Avg. Manufacturing Share	0.049	0.50	0.073	0.67
Union/Membership	-0.026	0.81	-0.044	0.86
Annual Growth in Less-Educated Adult Males	-0.811	0.06	-1.882	0.06
Annual Pop. Growth	-0.641	0.00	-0.991	0.05
Employment Growth	0.759	0.05	1.421	0.12
Avg. Employment-to-Population	0.215	0.02	0.266	0.20
Annual Growth in Manufacturing Employment	-0.510	0.18	1.758	0.05
Total Less-Educated Minority Males 1990	0.008	0.81	0.115	0.11
Regional Dummies				
New England	0.028	0.17	0.247	0.00
Mideast	0.033	0.08	0.113	0.01

[16] The model for white males explains about 50 percent of the variation between metro areas in the probability of white males holding living-wage employment. The F-statistic is significant and the regression error is less than 10 percent of the mean. The model for African American males explains about 27 percent of the variation across metro areas in the probability of a less-educated adult African American male holding living-wage employment. The F-statistic was significant, but the regression error was 27 percent of the mean.

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TABLE 8. REGRESSION RESULTS				
VARIABLES	WHITE LIVING-WAGE EMPLOYMENT RATIO 1990		BLACK LIVING-WAGE EMPLOYMENT RATIO 1990	
	COEFFICIENTS	P-VALUE	COEFFICIENTS	P-VALUE
Great Lakes	0.014	0.45	0.096	0.03
Plains	0.039	0.05	-0.017	0.71
Southeast	-0.021	0.26	0.051	0.23
Southwest	-0.047	0.02	0.070	0.12
Adjusted R Square	0.50		0.27	
Standard Error	0.04		0.09	
F-statistic	7.72	0.000	6.957	0.000

Table 9 presents the same analysis for the 1980–1990 change in the probability in living-wage employment.[17] For less-educated white males (columns 1 and 2), three of the economic and demographic variables are statistically significant—the two population growth variables and growth in employment. The only significant regional variable is the Southwest. The probability of holding living-wage employment for white males rose more there than in the Far West. For less-educated African American males, the only significant factors in the model are three of the regional variables. The probability of holding living-wage employment for less-educated African American males is higher in the Mideast and lower in the Southeast and Southwest than in the Far West.

TABLE 9. REGRESSION RESULTS				
VARIABLES	WHITE CHANGE IN LIVING-WAGE EMPLOYMENT RATIO 1980–1990		BLACK CHANGE IN LIVING-WAGE EMPLOYMENT RATIO 1980–1990	
	COEFFICIENTS	P-VALUE	COEFFICIENTS	P-VALUE
Intercept	-0.010	0.58	-0.057	0.36
Avg. Manufacturing Share	-0.003	0.85	-0.003	0.96
Union/Membership	-0.010	0.71	0.002	0.99
Annual Growth in Less-Educated Adult Males	-0.241	0.02	-0.567	0.12

[17]The white model explains about 21 percent of the variation in the probability of living-wage employment for white males across metro areas. The F-statistic is significant. However, the regression error is about 50 percent of the mean value. The model for African American males was considerably less robust than the white model. The model explains 18 percent of the variation in the probability of holding living-wage employment for less-educated adult African American males across metro areas. While the F-statistic was significant, the regression error was 100 percent of the mean value.

TABLE 9. REGRESSION RESULTS				
VARIABLES	WHITE CHANGE IN LIVING-WAGE EMPLOYMENT RATIO 1980–1990		BLACK CHANGE IN LIVING-WAGE EMPLOYMENT RATIO 1980–1990	
	COEFFICIENTS	P-VALUE	COEFFICIENTS	P-VALUE
Annual Pop. Growth	-0.116	0.03	-0.174	0.34
Employment Growth	0.268	0.00	0.415	0.21
Avg. Employment-to-Population	0.032	0.13	0.051	0.50
Annual Growth in Manufacturing Employment	-0.036	0.69	0.202	0.53
Total Less-Educated Minority Males 1990	0.003	0.66	0.034	0.21
Regional Dummies				
New England	0.007	0.18	0.066	0.00
Mideast	0.002	0.63	0.025	0.11
Great Lakes	0.003	0.45	0.030	0.06
Plains	0.001	0.81	-0.023	0.18
Southeast	-0.003	0.55	0.028	0.07
Southwest	-0.011	0.02	0.021	0.22
Adjusted R Square	0.21		0.18	
Standard Error	0.01		0.03	
F-statistic	2.83	0.002	2.48	0.006

These results yield two major observations. First and most fundamentally, the regression model fit the data for whites much better than for African Americans. This suggests that racial differences in the probability of holding living-wage employment across metro areas might result from differences in how white and African American males respond to the control variables in the regression model. Second, comparing the statistically significant coefficients (columns 1 and 3) for the two groups indicates substantial differences in the explanatory power of the various factors. For example, the two population growth variables depressed the probability of holding living-wage employment almost twice as much for African American males as for white males.

One way of assessing how racial differences in living-wage employment are affected by differences in the significance of the explanatory variables is to use the white coefficients in the African American model. The results (table 10) indicate that the predicted racial gap would be 36 percentage points lower if the two population change variables affected the probability of each group holding living-wage employment in the same way. In other words, labor market competition from population growth affects less-educated African American males more severely than similar whites.

TABLE 10. SIMULATED DIFFERENCES IN THE WHITE-BLACK GAP			
CONTROL VARIABLES	ACTUAL RACIAL GAP	PREDICTED GAP	IMPROVEMENT IN RACIAL GAP
Population Growth Variables Using White Male Coefficients	1.37	1.01	.36

A wealth of literature concludes that African American males face high barriers to entering the labor market[18]. One suggested reason is overt racial discrimination, either in the past or in the present, which tends to place African American males at the end of most job queues. In such a case, when labor market competition increases through a population increase, African American males lose ground more quickly than similar white males.

Another reason, documented by several researchers, is spatial mismatch[19] between low-income minorities living in central cities and job centers in the suburban fringes of most large metro areas. Such a mismatch also tends to place minority males at the end of most job queues because of difficulties getting back and forth to work. Metro areas with growing populations might actually produce higher levels of spatial isolation, especially if most of the population and the new jobs are growing in the suburbs and African American males are disproportionately concentrated in the central cities. The existence of a growing supply of workers (mainly white) near at hand would reduce employers' incentives to overcome any spatial mismatch problems of inner-city minorities.

Yet a third possibility is that education levels and age may not actually reflect labor market skills. If African American males are more likely to be educated in (inferior) inner-city schools, whereas whites are more likely to attend (better) suburban high schools, a high school diploma for an African American male will represent a lower quality of education than the same credential for a white male. African American males may also lack certain unobserved job skills compared with whites. To the extent that less-educated African Americans live in neighborhoods where unemployment is rampant, for example, they may not have been exposed to the "soft skills"[20] necessary to succeed in the labor market, such as getting to work on time or knowing how to behave toward a supervisor.

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[18] See Darity and Myers, 1998.

[19] The model presented in this paper did not attempt to directly control for spatial mismatch. However, the introduction of regional dummies partially controls for differences in spatial mismatch occurring in different sections of the country.

[20] See Holzer, 1999.

These skill deficits may again place less-educated adult African American males at the end of the job queue. In a slack labor market—e.g., a static labor market where the population is growing—increased competition for a declining share of living-wage employment opportunities will lengthen the job queue, putting African Americans farther and farther from the front.

DID SOME METRO AREAS DO BETTER OR WORSE THAN EXPECTED?

One of the objectives of this paper is to help give insight into whether particular institutional or policy differences contribute to variations in living-wage employment opportunities across metro areas. To address this question, we perform a simulation that predicts a metro area's living-wage employment ratio (after controlling for the same systematic explanatory factors used in the regressions discussed above) and compare it with the actual ratio for that metro area (using a 90 percent confidence interval). Metropolitan areas that perform better (or worse) than predicted by the equation may represent the influence of unique local institutional, policy, or programmatic factors.

The results for the 1990 living-wage employment ratio (table 11) show that four metro areas were above and three below their predicted levels. The same simulation for 1980–1990 changes in living-wage employment ratios (table 12) identifies seven metro areas whose actual values were above and five whose actual values were below their predicted ones. What about racial differences (table 13)? In two areas the ratio for whites was better than predicted and in three it was worse. In three areas the ratio for African Americans was better than predicted and in two areas it was worse.

TABLE 11. METRO AREAS WITH BETTER OR WORSE THAN PREDICTED LIVING-WAGE EMPLOYMENT

METRO AREA	ACTUAL	PREDICTED	ACTUAL-PREDICTED
Above			
Augusta	0.48	0.41	0.07
Richmond	0.46	0.39	0.07
San Francisco	0.40	0.34	0.06
Washington	0.46	0.39	0.07
Below			
Lakeland	0.32	0.40	-0.08
Providence	0.40	0.46	-0.06
Stockton	0.33	0.39	-0.06

TABLE 12. METRO AREAS WITH BETTER OR WORSE THAN PREDICTED CHANGE IN LIVING-WAGE EMPLOYMENT			
METRO AREA	ACTUAL	PREDICTED	ACTUAL-PREDICTED
Above			
Augusta	0.00	-0.02	0.02
Columbia, SC	-0.01	-0.03	0.01
Lansing	0.00	-0.02	0.02
Melbourne	-0.01	-0.02	0.01
Oklahoma City	-0.02	-0.04	0.01
Tulsa	-0.02	-0.03	0.02
Ventura	-0.02	-0.03	0.01
Below			
Akron	-0.03	-0.02	-0.01
Charleston	-0.04	-0.02	-0.01
Lakeland	-0.03	-0.02	-0.01
Pittsburgh	-0.04	-0.03	-0.02
Stockton	-0.03	-0.02	-0.01

TABLE 13. METRO AREAS WHERE WHITE AND BLACK MALES HAD LIVING-WAGE EMPLOYMENT PROBABILITIES BETTER OR WORSE THAN PREDICTED		
METRO AREA	ACTUAL/PREDICTED FOR WHITES	ACTUAL/PREDICTED FOR BLACKS
Above		
Columbia, SC	1.18	
Memphis	1.20	
Albuquerque		1.66
Bridgeport		1.60
Denver		1.67
Below		
El Paso	0.81	
Lakeland	0.82	
Riverside	0.85	
Stockton		0.25
Tucson		0.55

Notably, Augusta, Georgia, performed better than predicted for both formulations of the living-wage employment probability ratio, and Stockton, California, and Lakeland, Florida, performed worse than predicted for both formulations of the living-wage employment ratio. Interestingly, there were no common metro areas where both white and black males did better (or worse) than predicted. This suggests that whatever unaccounted-for factors were captured in the simulation process, they had different effects on African American and non-Hispanic white

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males. Case studies of strong outliers such as these are potentially crucial sources for further insights into why some metro areas have more hospitable living-wage environments for less-educated workers than others.

There are several plausible explanations related to both the supply and demand sides of the labor market that might yield insights into what factors not captured in the original regression models could be responsible for the outliers. With respect to the demand side, one possibility is that the prevailing wage rates were higher (or lower) in those metro areas with better (or worse) living-wage employment than predicted. If this were the case and all else being equal, less-educated workers would have higher (or lower) living-wage employment rates than predicted. Another possibility is that wage inequality was lower (or higher) than average in these metro areas. In this case, more (or less) of the benefits of growth than predicted would be channeled to less-educated adult males. Finally, there may be differences in industry-occupational structure across metro areas that are not captured by differences in manufacturing share. In particular, some high-paying industries and occupations may be more or less accessible to less-educated adult male workers in some metro areas than in others.

With respect to supply side factors, as noted, equivalent education credentials may not be equal across metro areas. Thus, someone with a high school diploma in Atlanta may not have the same quality of education as a similarly credentialed individual in Boston. The high (and low) performing areas as reflected in the simulations may be areas where the quality of education of less-educated adult males is higher (or lower) than average, which could explain why less-educated males in those areas did better (or worse) than predicted.

It is also possible that the high (or low) performing metro areas had more (or less) effective local labor market institutions than average. For instance, there may be more (or less) effective structures to channel high school graduates into career-oriented fields. Job training and placement programs might operate labor market–wide rather than being limited to single political jurisdictions. And local governments, through their economic development process, may have established efficient and trusting relationships with employers in some areas—relationships that facilitate connecting less-educated residents to living-wage jobs.

To the extent that other institutional, policy, or programmatic factors also contribute to better (or worse) than expected performance, understanding how they function could be very valuable to those working to improve the design of workforce and economic development strategies to help less-educated adult males.

IMPLICATIONS AND AREAS FOR FURTHER RESEARCH

The findings reported here suggest, first and foremost, that economic growth alone has not been enough to keep living-wage employment opportunities for less-educated adult males from declining. Consistent with much other research on growing inequality in the labor market

between the highly educated and the less educated, metro area data make it clear that the opportunity for living-wage employment among less-educated adult males declined substantially between 1980 and 1990. While the less-educated adult male population expanded slightly during the period, controlling for these supply side changes was not enough to explain the deterioration in living-wage employment for non–college educated males.[21]

Two popular explanations for this decline are de-industrialization (i.e., loss of manufacturing employment) and falling rates of unionization. The analysis presented here casts doubt on both these explanations. The regression analysis indicates that neither the average share of manufacturing employment, the growth in manufacturing employment, nor unionization rates are significant in explaining variations in living-wage employment. Thus, the loss of manufacturing and lower unionization rates may not explain the loss of or variation in living-wage employment for less-educated adult males. This suggests that policies aimed at improving or stabilizing manufacturing employment or encouraging unionization rates cannot be counted on *per se* to have salutary effects on living-wage employment opportunities for less-educated adult males.

Rather than focusing on changes in the manufacturing sector alone, it might be more beneficial to examine how to improve access to better jobs for less-educated workers in other economic sectors as well. Descriptive statistics indicate that less-educated adult males actually increased their manufacturing employment while substantially losing employment in the non-manufacturing sector. More generally, economic and workforce development and welfare-to-work interventions that focus primarily on connecting people with employment, regardless of what sector, may find work effort increasing without concomitant declines in poverty—unless the living-wage potential of that employment is directly addressed.

Second, even when regression analysis removes a number of systematic factors associated with living-wage employment opportunity, a number of areas still had higher (or lower) than predicted levels of living-wage employment. This strongly suggests that the combination of historical development patterns, institutional arrangements, policy regimes, and additional demographic factors have area-specific impacts on living-wage employment opportunities for less-educated adult males. These factors might provide important insight into improving the effectiveness of workforce development policy and programs.

Third, the large racial/ethnic gaps in the living-wage employment and full-time employment ratios in 1990, and particularly their *growth* between 1980 and 1990, strongly suggest that racial/ethnic inequality is a major problem among less-educated adult males. Racial/ethnic discrimination is an obvious possibility. There are others as well.

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[21] See Levy and Murnane (1992).

One factor seems to be that, unlike the case of white males, the relative and absolute number of less-educated minority males actually increased between 1980 and 1990. This created a larger supply of minority males competing for living-wage employment. In order to satisfy this increased supply, the economy needed to produce much more living-wage employment available to minority males than it actually did.

The descriptive data (not shown) suggest that, if the supply of less-educated adult minority males had grown at the same rate as it did for whites, racial differences in living-wage opportunities would have been substantially reduced. That the regression analysis does not confirm this result indicates that, even after controlling for differences in supply, African American males still had a lower probability of holding living-wage employment than their white counterparts.

In addition to these potential supply side effects, the regression analysis indicates that, on the demand side, African American males respond differently from whites to the same economic, institutional, and demographic conditions. This implies that, in order to affect the opportunities of minorities in the labor market, specific attention needs to be given to why minorities and whites respond differently to the same factors.

Areas for Further Research

Further research could take a number of different directions. The following five seem particularly promising.

First, the most recent data used in this paper is for 1990. Since that time, the U.S. economy has been in a long and robust expansion. Many believe that information and services drive the current economy, not the more traditional goods-producing industries. As a result, many traditional economic patterns and relationships may have changed. Given this, it cannot be assumed that the patterns discussed here still describe the relationship between metro areas and living-wage employment opportunities for less-educated male workers. It would be useful to identify other data sets that might yield more recent evidence of what is occurring in metro area labor markets.

Second, more qualitative case study–oriented research would be useful to determine whether the metro areas with better (or worse) living-wage employment ratios than statistically predicted had unique policy, programmatic, or institutional innovations (or deficiencies) linked to those divergences. Identifying such unique conditions could be extremely valuable for efforts to improve the design and operation of economic and workforce development strategies.

Third, given the interest in regionalism and smart growth, it might also be useful to include more direct measures of such factors in further regression modeling. For example, did metro areas where the central cities had dominant shares of the regions' population and economy provide more or fewer living-wage employment opportunities?

Fourth, the measure of living-wage employment used here does not account for cost-of-living differences across areas. One result is that the living-wage employment ratios in areas such as New York, Los Angeles, or Boston are probably overstated and in areas such as Pittsburgh, or El Paso, Texas, understated. Finding a computationally malleable and substantively reliable method of accounting for variations in area cost of living could produce a more accurate picture of differences in labor market opportunities for less-educated adult males. One possibility worth exploring is an index based on housing costs, which typically dominate wider cost-of-living measures.

Fifth, given the focus on moving welfare recipients (who are primarily women) into the labor market, it would be useful to undertake a similar analysis of living-wage employment opportunities for women. Welfare-to-work policies could be greatly sharpened with a better understanding of the capacity of local metro labor markets to absorb less-educated females into living-wage employment.

REFERENCES

Chinhui, Juhn. 1999. "Wage Inequality and the Demand for Skill: Evidence from Five Decades." *Industrial and Labor Relations Review* 52 (3): 424–43.

Cooke, Thomas J. 1996. "City-Suburb Differences in African American Male Labor Market Achievement." *Professional Geographer* 48 (4): 458–67.

Darity, William, and Samuel Myers. 1998. *Persistent Disparity: Race and Economic Inequality in the United States since 1945.* Northampton, Mass. Edward Elgar Publishing.

Holzer, Harry. 1998. "Will Employers Hire Welfare Recipients? Recent Survey Evidence from Michigan." Institute for Research on Poverty, Michigan State University. Discussion Paper no. 1177-98. (October).

———1999. "The Low-Wage Labor Market: Challenges and Opportunities for Economic Self-Sufficiency." http://aspe.os.dhhs.gov/hsp/lwlm99/holzer.htm

Houseman, Susan. 1995. "**Job Growth and the Quality of Jobs in the U.S. Economy."**

Upjohn Institute Staff Working Paper 95-39.
http://www.upjohninst.org/publications/wp/95-39.pdf

Kain, John F., and Joseph Persky. 1969. "Alternatives to the Gilded Ghetto." *The Public Interest* (Winter): 74-87.

Levy, Frank, and Richard J. Murnane. 1992. "U.S. Earnings Levels and Earnings Inequality: A Review of Recent Trends and Proposed Explanations." *The Journal of Economic Literature* 30 (September): 1333–81.

Linneman, Peter D. and Anita Summers. 1999. "Patterns and Processes of Employment and Population Decentralization in the United States." *Urban Change in the United States and Western Europe: Comparative Analysis and Policy*. Washington, DC. The Urban Institute Press.

Madden, Janet. 2000. *Changes in Income Inequality within U.S. Metropolitan Areas.* Kalamazoo, Mich.: W. E. Upjohn Institute for Employment Research.

McLafferty, Sara, and Valerie Preston. 1996. "Spatial Mismatch and Employment in a Decade of Restructuring." *Professional Geographer* 48 (4): 420–31.

U.S. Department of Housing and Urban Development. 1999. "Now Is the Time: Places Left Behind in the New
Economy."http://www/hud.gov/library/bookshelf18/pressrel/leftbehind/menu.html

Pearce, Diana and Jennifer Brooks, 1999. *The Self-Sufficiency Standard for the Washington, D.C. Metropolitan Area*, Washington, DC: Wider Opportunities for Women and Diana Pearce

Wilson, William Julius. 1987. *The Truly Disadvantaged: Inner City, the Underclass, and Public Policy*. Chicago: University of Chicago Press.

———. 1997. *When Work Disappears: The World of the New Urban Poor*. New York: Vintage Books.

APPENDIX A: METHODOLOGY

The most recent data base available from which to perform an extensive metro analysis of labor market outcomes for individual adult males by individual metropolitan areas is the 1980 and 1990 Integrated Private Use Micro data Series (IPUMS). Its weakness is that it is roughly ten years old. Given the strength of the expansion in the 1990s and what appear to be significant technological and structural changes in the U.S. economy, it may give us only a modest insight into what is happening now in the labor market for less-educated workers. However, the goal of this paper is to provide a starting point for empirically examining how living wages differ across metropolitan areas.[22] The hope is that the results from this paper will be useful in helping to provide some insight and to frame questions about the living-wage issue for future research.

The sample for this paper is non-institutionalized adult males 25–55 years old with no more than a high school diploma, stratified by race and ethnicity (these are referred to as less-educated adult males in the paper). The IPUMS includes statistically reliable samples for the largest 100 metropolitan areas in the U.S. in 1980 and 1990. Since only 99 of these areas were available in both 1980 and 1990, the sample for the paper was drawn from the 99 largest metropolitan areas in the 1980 and 1990 IPUMS. Because of a lack of observations for minority males, 2 of the 99 metro areas were dropped, resulting in a final sample of 97.

The paper focuses on changes in the living-wage employment ratio. The ratio is calculated by dividing the number of less-educated adult males working 35–45 hours per week all year and earning above the federal poverty level for a family of four by the total less-educated adult male population.

In addition to presenting descriptive analysis of changes in the living-wage employment ratio, the paper also presents a regression analysis. The regression analysis uses the living-wage employment ratio and the change in the living-wage employment ratio as dependent variables. The sample for the regression was a cross-sectional sample of the 97 largest metro areas in 1980 and 1990. Table A-1 presents the control variables used in the regression.

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[22] As part of a larger research project on living wages, the Urban Institute's Program on Regional Economic Opportunity is also using Current Population Survey data to provide descriptive and multivariate analysis at the national and regional level on variations in the living wage during the 1990s.

TABLE A-1. REGRESSION CONTROL VARIABLES	
CONTROL VARIABLES	HYPOTHESES
Average manufacturing share = Sum of manufacturing employment as percent of total employment in 1980 and 1990 divided by 2.	Expected sign is positive. Manufacturing is expected to increase the opportunities for living-wage employment.
Union membership = Percent of all employees in union jobs by state in 1983.	Expected sign is positive. Union membership is thought to improve wages for less-educated workers.
Average employment ratio = Sum of employment-to-population ratio in 1980 and 1990 divided by 2.	Expected sign is positive. This variable, measures labor market tightness. The tighter the labor market, the higher the wages and the greater the opportunity for living-wage employment.
Annualized[23] change in manufacturing employment = Growth in metro manufacturing employment.	Expected sign is positive. Increased manufacturing should lead to greater living-wage employment.
Annualized change in total employment = Metro employment growth.	Expected sign is positive. Economic growth should lead to tighter labor markets, higher wages, and greater living-wage employment opportunities.
Annualized growth in less-educated adult male population.	Expected sign is negative. Large less-educated adult male population is hypothesized to mean greater competition for scarce living-wage employment.

[23] Annualized figures are the geometric average for the 10-year period from 1980–1990.

TABLE A-1. REGRESSION CONTROL VARIABLES	
CONTROL VARIABLES	HYPOTHESES
Total less-educated adult male minority population as a percent of total population.	Expected sign is negative. Less-educated adult minority males are hypothesized to have lower living-wage employment ratios. Therefore, a large percent of less-educated adult minority males would tend to depress the living-wage employment ratio. There are a variety of reasons why minority males might have lower living-wage employment rates, including lower wages resulting from discrimination.
Annualized change in metro population.	Expected sign is negative. The larger the population growth, the greater the hypothesized competition for scarce employment opportunities.
Regional dummies = Zero or one, depending on what section of the country the metro area is in. Seven regional areas are included: Far West, Southwest, Southeast, Great Lakes, Mideast, Plains, and New England. The Far West is the reference variable.	No expectation for signs. Regional dummies are intended to capture region-specific institutional, policy, socio-demographic, and economic factors.

TABLE A-2. MEAN VALUES FOR REGRESSION VARIABLES				
	MEAN VALUES	STD. DEV.	MINIMUM	MAXIMUM
VARIABLES				
Avg. Manufacturing Share	0.20	0.08	0.04	0.36
Union/Membership	21.5%	0.07	0.06	0.33

TABLE A-2. MEAN VALUES FOR REGRESSION VARIABLES				
	MEAN VALUES	STD. DEV.	MINIMUM	MAXIMUM
VARIABLES				
Annual Growth in Less-Educated Adult Males	-0.01	0.01	-0.04	0.05
Annual Pop. Growth	0.01	0.01	-0.01	0.05
Annual Employment Growth	0.04	0.02	0.00	0.08
Avg. Employment-to-Population	0.34	0.05	0.23	0.57
Annual Growth in Manufacturing Employment	-0.03	0.01	-0.06	0.03
Total Less-Educated Minority Males 1990	0.12	0.18	0.02	0.86

Key Simplifying Assumptions

Certain simplifying assumptions have been used in the analysis reported in this paper. First, full-time, living-wage employment is defined as 35–45 hours a week, 40 or more weeks a year. This is an attempt to balance the impact that individual choices have on hours worked against demand side factors that influence the quality of available work (such as wages and part-time vs. full-time employment). On the one hand, some individuals may have multiple earners in their households. As a result, they may be able to command hourly wages that would keep them and their families out of poverty, but choose to work fewer hours than is required to do so. On the other hand, many individuals with low wages compensate by working 60 or more hours a week. Some jobs with decent wages are only part-time, and so do not allow an individual to earn enough to support a family.

Because family economic well-being is contingent on family size, and individuals make choices about family size based on the quality and availability of employment, an earnings level high enough to keep a family of four out of poverty was chosen as the living-wage employment cut-off. Using this standard minimizes the impact that individual choices about family size have on the living-wage calculation. This means that the measure of living wages is not affected by family size. This allows for an assessment of the quality of work available in the labor market.

Second, the paper uses "less educated" as a synonym for individuals with a high school diploma or less. An important assumption in this analysis is that individuals with similar education and in the same age group have similar labor market skills and therefore should experience similar rewards in the labor market. This may not be the case. There is no guarantee

that two individuals of the same age with high school diplomas have achieved an equal level of competence or employability skills.[24] Given this, variations in the dependent variables may actually be measuring differences in the quality of individuals' labor market skills, not the quality of the jobs available in the labor market. Unfortunately, our data set does not allow us to directly observe differences in the quality of individuals' labor market skills. However, despite these potential limitations, the use of education and age as proxies for skill is generally well established in the human capital and labor economics literature.

Finally, the paper also uses the term "adult males" to refer to men 25–55 years old. The underlying assumption is that all men within this age group have roughly the same experience in the labor market. It is probably reasonable to assume that men at age 25 have different labor market experiences than men 45 or 55 years old. However, it also seems reasonable to expect that overall changes are likely to have similar effects on all less-educated adult males. For example, if we assume that younger adult males have lower rates of living-wage employment than older adult males, it still seems reasonable to expect that the impact of economic changes would affect them in roughly the same manner.

[24] See Holzer (1999) for discussion of these employability or job readiness skills. Employers often see these employability skills as a prerequisite for any employment.

APPENDIX B: TABLES

TABLE B-1. LIVING-WAGE EMPLOYMENT MEASURES				
MSA	1990 LIVING-WAGE EMPLOYMENT RATIO	ANNUALIZED CHANGE IN LIVING-WAGE EMPLOYMENT 1980-1990	1990 LIVING-WAGE EMPLOYMENT SHARE INDEX	1980-1990 ANNUALIZED CHANGE IN LIVING-WAGE EMPLOYMENT SHARE INDEX
AVERAGE	0.41	-0.02	1.0	-5.8%
Akron	0.39	-0.03	1.1	-7.3%
Albany	0.48	-0.02	1.0	-6.1%
Albuquerque	0.31	-0.04	0.7	-7.4%
Allentown	0.50	-0.02	1.6	-4.1%
Atlanta	0.42	-0.02	0.9	-6.3%
Augusta	0.48	0.00	1.4	-2.7%
Austin	0.31	-0.05	0.6	-7.6%
Bakersfield	0.32	-0.02	1.1	-3.8%
Baltimore	0.45	-0.02	1.1	-6.2%
Baton Rouge	0.39	-0.03	1.1	-5.9%
Birmingham	0.38	-0.03	1.1	-6.3%
Boston	0.43	-0.02	0.8	-6.2%
Bridgeport	0.50	-0.01	1.2	-4.6%
Buffalo	0.47	-0.02	1.2	-5.9%
Canton	0.46	-0.02	1.5	-5.6%
Charleston	0.35	-0.04	0.9	-7.1%
Charlotte	0.45	-0.01	1.1	-4.8%
Chattanooga	0.37	-0.03	1.1	-6.7%
Chicago	0.45	-0.02	1.1	-5.8%
Cincinnati	0.47	-0.01	1.2	-5.7%
Cleveland	0.43	-0.02	1.2	-5.4%
Columbia, SC	0.40	-0.01	0.9	-4.9%
Columbus	0.42	-0.02	1.1	-5.6%
Dallas	0.37	-0.03	0.8	-6.9%
Dayton	0.42	-0.02	1.1	-6.1%
Denver	0.42	-0.03	0.7	-6.7%
Des Moines	0.47	-0.02	0.9	-6.5%
Detroit	0.38	-0.02	1.0	-6.6%
El Paso	0.28	-0.05	0.9	-6.0%
Ft. Lauderdale	0.35	-0.03	0.9	-5.9%
Fresno	0.30	-0.03	0.8	-4.8%

TABLE B-1. LIVING-WAGE EMPLOYMENT MEASURES				
MSA	1990 LIVING-WAGE EMPLOYMENT RATIO	ANNUALIZED CHANGE IN LIVING-WAGE EMPLOYMENT 1980-1990	1990 LIVING-WAGE EMPLOYMENT SHARE INDEX	1980-1990 ANNUALIZED CHANGE IN LIVING-WAGE EMPLOYMENT SHARE INDEX
AVERAGE	0.41	-0.02	1.0	-5.8%
Grand Rapids	0.47	-0.02	1.0	-7.1%
Greensboro	0.46	-0.01	1.3	-4.6%
Greenville, SC	0.41	-0.02	1.1	-6.2%
Harrisburg	0.53	-0.01	1.6	-3.7%
Hartford	0.45	-0.01	1.0	-4.8%
Houston	0.35	-0.04	0.9	-6.1%
Indianapolis	0.46	-0.01	1.1	-5.7%
Jackson	0.28	-0.05	0.7	-5.9%
Jacksonville	0.37	-0.03	0.9	-6.0%
Johnson City	0.40	-0.03	1.5	-5.2%
Kansas City	0.44	-0.03	1.0	-6.0%
Knoxville	0.37	-0.03	1.1	-5.1%
Lakeland	0.32	-0.03	1.0	-6.9%
Lancaster	0.47	-0.01	1.5	-4.0%
Lansing	0.48	0.00	0.9	-5.6%
Las Vegas	0.45	-0.02	1.2	-5.0%
Little Rock	0.36	-0.03	0.9	-4.7%
Los Angeles	0.36	-0.03	0.8	-5.2%
Louisville	0.44	-0.03	1.3	-5.4%
Melbourne	0.34	-0.01	0.8	-3.1%
Memphis	0.38	-0.03	1.0	-6.0%
Miami	0.30	-0.04	0.9	-4.9%
Milwaukee	0.48	-0.02	1.0	-6.6%
Minneapolis	0.51	-0.02	0.9	-6.6%
Mobile	0.36	-0.02	1.1	-5.4%
Nashville	0.41	-0.02	1.1	-5.7%
New Haven	0.48	-0.01	1.1	-4.2%
New Orleans	0.33	-0.03	0.9	-5.7%
New York	0.42	-0.02	1.0	-5.4%
Norfolk	0.43	-0.02	1.0	-4.6%
Oklahoma City	0.39	-0.02	0.8	-5.4%
Omaha	0.43	-0.02	0.9	-5.6%
Orlando	0.40	0.00	0.9	-4.3%
Philadelphia	0.46	-0.02	1.2	-5.5%
Phoenix	0.37	-0.02	0.8	-6.2%

TABLE B-1. LIVING-WAGE EMPLOYMENT MEASURES				
MSA	1990 LIVING-WAGE EMPLOYMENT RATIO	ANNUALIZED CHANGE IN LIVING-WAGE EMPLOYMENT 1980-1990	1990 LIVING-WAGE EMPLOYMENT SHARE INDEX	1980-1990 ANNUALIZED CHANGE IN LIVING-WAGE EMPLOYMENT SHARE INDEX
AVERAGE	0.41	-0.02	1.0	-5.8%
Pittsburgh	0.39	-0.04	1.1	-7.9%
Portland	0.42	-0.03	0.8	-7.0%
Providence	0.40	-0.02	1.1	-5.4%
Raleigh	0.40	-0.03	0.7	-7.2%
Richmond	0.46	-0.02	1.1	-5.0%
Riverside	0.39	-0.02	1.1	-4.2%
Rochester	0.46	-0.02	1.0	-5.6%
Sacramento	0.38	-0.02	0.7	-5.6%
St. Louis	0.49	-0.01	1.1	-5.5%
Salt Lake City	0.41	-0.03	0.8	-6.8%
San Antonio	0.31	-0.04	0.8	-6.9%
San Diego	0.36	-0.02	0.7	-4.6%
San Francisco	0.40	-0.03	0.7	-5.9%
San Jose	0.42	-0.03	0.7	-6.0%
Seattle	0.48	-0.02	0.7	-6.2%
Springfield	0.45	-0.02	1.2	-4.5%
Stockton	0.33	-0.03	1.0	-6.1%
Syracuse	0.46	-0.02	1.1	-5.9%
Tacoma	0.45	-0.03	1.1	-5.3%
Tampa	0.34	-0.02	0.8	-5.6%
Toledo	0.45	-0.02	1.2	-6.2%
Tucson	0.35	-0.03	0.7	-7.6%
Tulsa	0.45	-0.02	1.0	-5.0%
Ventura	0.35	-0.02	0.7	-4.3%
Washington	0.46	-0.02	0.7	-5.0%
West Palm Beach	0.37	-0.01	0.9	-4.5%
Wichita	0.51	-0.01	1.1	-4.7%
Wilmington	0.50	-0.02	1.3	-5.4%
Worcester	0.50	0.00	1.2	-4.3%
York	0.50	-0.01	1.5	-4.8%
Youngstown	0.41	-0.03	1.4	-5.0%

TABLE B-2. RACIAL ETHNIC GAP IN LIVING-WAGE EMPLOYMENT				
MSA	1980 WHITE-BLACK GAP	1990 WHITE-BLACK GAP	1980 WHITE-HISPANIC GAP	1990 WHITE-HISPANIC GAP
AVERAGE	1.15	1.37	1.14	1.34
Akron	1.08	1.48	0.91	0.00
Albany	1.42	1.25	1.14	1.02
Albuquerque	0.58	0.50	0.94	1.16
Allentown	1.05	1.10	1.51	2.22
Atlanta	1.07	1.31	1.07	1.19
Augusta	1.11	1.15	0.76	0.50
Austin	1.11	1.30	1.15	1.37
Bakersfield	1.45	1.84	1.57	1.74
Baltimore	1.12	1.45	0.85	1.15
Baton Rouge	1.27	1.59	0.93	2.83
Birmingham	1.39	1.61	0.00	0.00
Boston	1.04	1.34	1.13	1.51
Bridgeport	0.96	0.68	0.85	1.24
Buffalo	1.32	1.78	0.91	1.97
Canton	0.87	1.06	0.54	1.39
Charleston	1.65	1.12	1.18	0.94
Charlotte	1.15	1.21	0.70	1.56
Chattanooga	1.10	1.42	0.00	0.57
Chicago	1.17	1.41	1.02	1.18
Cincinnati	1.22	1.74	0.70	1.86
Cleveland	1.17	1.32	1.23	1.41
Columbia, SC	1.16	1.68	0.97	0.00
Columbus	1.04	1.22	1.87	1.17
Dallas	1.10	1.48	1.01	1.20
Dayton	1.29	1.43	1.18	1.31
Denver	1.18	1.12	1.04	1.17
Des Moines	1.14	6.43	0.71	0.51
Detroit	1.25	1.41	0.86	1.63
El Paso	1.42	0.88	1.19	1.05
Ft. Lauderdale	1.16	1.37	0.87	0.98
Fresno	1.06	2.06	1.51	1.76
Grand Rapids	1.17	1.03	1.96	1.09
Greensboro	1.12	1.24	0.80	1.01
Greenville, SC	1.07	1.22	0.00	0.42
Harrisburg	1.04	1.73	0.98	0.77
Hartford	1.07	1.18	1.29	1.45
Honolulu	0.00	1.42	0.91	1.24

TABLE B-2. RACIAL ETHNIC GAP IN LIVING-WAGE EMPLOYMENT				
MSA	1980 WHITE-BLACK GAP	1990 WHITE-BLACK GAP	1980 WHITE-HISPANIC GAP	1990 WHITE-HISPANIC GAP
AVERAGE	1.15	1.37	1.14	1.34
Houston	1.01	1.60	1.11	1.32
Indianapolis	1.35	1.50	0.87	1.84
Jackson	1.13	1.41	0.00	0.00
Jacksonville	1.18	1.45	2.96	1.30
Johnson City	1.18	1.83	0.54	0.00
Kansas City	0.94	2.22	0.87	1.13
Knoxville	1.64	1.23	2.00	0.00
Lakeland	1.62	1.17	3.50	5.38
Lancaster	0.83	1.13	0.93	1.06
Lansing	1.06	1.05	0.85	1.81
Las Vegas	1.00	0.90	1.14	1.27
Little Rock	0.97	1.37	0.74	0.00
Los Angeles	1.14	1.34	1.04	1.23
Louisville	1.52	1.54	0.80	0.46
Melbourne	0.91	1.88	0.75	0.77
Memphis	1.15	1.78	1.35	0.00
Miami	1.49	1.17	1.14	1.40
Milwaukee	1.06	2.22	0.92	1.35
Minneapolis	1.28	2.57	1.04	1.16
Mobile	1.09	1.67	0.00	0.81
Nashville	1.10	1.35	0.68	0.56
New Haven	1.09	1.26	0.86	1.08
New Orleans	1.18	1.84	1.32	1.28
New York	1.08	1.28	1.18	1.32
Norfolk	1.17	1.17	0.92	1.63
Oklahoma City	1.27	1.14	1.21	1.46
Omaha	1.58	1.28	0.74	0.63
Orlando	1.32	1.44	1.14	1.59
Philadelphia	1.25	1.55	1.33	1.45
Phoenix	1.91	1.04	1.15	1.26
Pittsburgh	1.26	1.88	1.22	2.31
Portland	1.09	1.62	1.92	1.45
Providence	1.33	0.94	1.34	1.89
Raleigh	1.62	1.06	1.01	5.36
Richmond	1.15	1.29	0.00	3.39
Riverside	0.81	1.25	0.96	1.02
Rochester	1.33	1.62	0.98	1.32

TABLE B-2. RACIAL ETHNIC GAP IN LIVING-WAGE EMPLOYMENT				
MSA	1980 WHITE-BLACK GAP	1990 WHITE-BLACK GAP	1980 WHITE-HISPANIC GAP	1990 WHITE-HISPANIC GAP
AVERAGE	1.15	1.37	1.14	1.34
Sacramento	1.44	2.53	1.26	1.48
St. Louis	1.30	1.57	0.88	0.84
Salt Lake City	0.67	2.83	0.90	1.33
San Antonio	1.19	1.25	1.10	1.33
San Diego	1.48	1.28	1.26	1.21
San Francisco	1.18	1.87	1.02	1.17
San Jose	1.07	1.36	1.12	1.31
Scranton	0.82	0.00	0.74	0.76
Seattle	0.97	1.35	1.24	1.24
Springfield	1.34	1.06	1.39	1.19
Stockton	1.38	5.38	1.44	1.38
Syracuse	0.93	1.14	1.11	1.73
Tacoma	1.07	2.08	1.00	1.19
Tampa	0.94	1.17	0.88	1.07
Toledo	1.34	1.05	1.28	1.15
Tucson	0.83	1.91	0.93	1.04
Tulsa	1.07	1.21	0.94	0.72
Ventura	1.24	1.58	1.50	1.46
Washington	1.00	1.13	1.00	1.37
West Palm Beach	1.33	1.78	1.39	1.43
Wichita	1.07	4.16	0.80	0.77
Wilmington	1.07	1.22	1.79	1.81
Worcester	1.23	0.94	1.16	1.41
York	0.91	1.57	0.56	1.21
Youngstown	1.36	2.59	2.08	0.67
Note: Zero means the sample size was too small to calculate the index.				

APPENDIX C: A TYPOLOGY FOR METROPOLITAN AREAS BASED ON LIVING-WAGE EMPLOYMENT

The data produced for this paper not only allow metro areas to be ranked by a single variable, but also to be classified by their living-wage employment ratio and their living-wage employment share. This classification permits the development of a tentative typology of metro areas based on the opportunity to hold living-wage employment. One question the typology should address is whether metro areas with high (or low) living-wage employment ratios also had high (or low) rates of change in living-wage employment. Table C-1 presents a matrix, which classifies metro areas by two variables, the 1990 living-wage employment ratio and the change in the employment ratio between 1980 and 1990. Metro areas were classified into four groups:

- The high-opportunity metros—those with above-average scores on both variables
- The low-opportunity metros—those with below-average scores on both variables
- The declining-opportunity metros—those metros with above-average scores on living-wage employment levels but below-average scores on the change in living-wage employment
- The improving-opportunity metros—those with below-average scores on living-wage employment levels but above-average scores on the change in living-wage employment.

The high-opportunity metros have the highest living-wage employment ratios and the highest growth in living-wage employment. These metros tended to have slower population growth, slower employment growth, and slower manufacturing growth. However, they have relatively higher levels of manufacturing income, higher union membership, and smaller minority populations. In addition, these metros tend to be in the New England, Mideast, and the Great Lakes regions of the country.[25]

The declining-opportunity metros had higher-than-average living-wage employment ratios but below-average improvements in living-wage employment. While opportunities for holding living-wage employment were relatively high, those opportunities were declining. In these metro areas there appeared to be no significant relationships to the demographic or economic variables used in this paper. However, declining metro areas tended to be in the Plains and Far West regions of the country.

[25] These relationships were based on simple correlation analysis significant at the 10-percent-or-less level.

Improving-opportunity metro areas had below-average living-wage employment ratios, but above-average rates of growth in the living-wage employment ratio. These metros seem to have had lower-than-average opportunities for living-wage employment, but the opportunities for living-wage employment were improving relative to other metro areas. These metro areas had fast-growing populations and growing employment. However, they had low levels of union membership and manufacturing employment. These metro areas also tended to be located in the Far West and Southeast.

Finally, low-opportunity metro areas had below-average opportunities for living-wage employment and saw those opportunities decline. These metro areas tended to have faster-growing populations and relatively faster-growing manufacturing employment. These areas also tended to have higher minority populations. At the same time, union membership, manufacturing employment, and employment-to-population ratios tended to be low. These metro areas were more likely to be in the Southwest and Southeast.

Table C-2 uses the same four categories as table C-1. However, the variables used were the living-wage employment share in 1990 and the change in the living-wage employment share between 1980 and 1990.[26] The high-opportunity metro areas had slow population growth, relatively smaller minority populations, and declining manufacturing employment. However, union membership and manufacturing employment tended to be higher than in other metro areas. These metro areas also tended to be in New England and the Mideast regions of the country. Low-opportunity areas had high population growth, and faster employment growth and higher employment-to-population ratios. Moreover, these metros tended to have higher-than-average minority populations. These areas also had lower manufacturing employment and union membership. These metro areas were also located in the Southwest and Plains regions.

Declining metro areas had above-average living-wage employment shares, but declined faster than the average. These metro areas had slow population, employment, and manufacturing employment growth. These metro areas also had smaller minority populations. Union membership and manufacturing employment was relatively high in these metro areas, and they tended to be located in the Mideast and Great Lakes region of the country. Improving metro areas, on the other hand, had a below-average living-wage employment share, but the share grew faster than the average. In these metro areas, population and employment tended to grow faster than average. Moreover, they tended to have higher minority populations. Average employment-to-population ratios tended to be high, but union membership and manufacturing employment were low.

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[26] The living-wage employment share is an index, which measures the proportion of all jobs that earn a living wage and are held by less-educated adult males.

From a policy standpoint, the improving-opportunity metro areas may be the most interesting. These are the areas with below-average living-wage employment ratios (or share indices) and above-average improvements in their living-wage employment ratio (or share). Compared with the high-opportunity metros, these metro areas had lower levels of union membership and manufacturing employment, but higher population and employment growth. Improving metro areas' characteristics tended to be very similar to the low-opportunity metro areas. However, improving metro areas managed to convert these same characteristics into improved living-wage employment opportunities for less-educated adult male workers. What, if any, policy or institutional innovations distinguish improving metro areas from low-opportunity metro areas?

TABLE C-1. TYPOLOGY OF METRO AREAS BY LIVING-WAGE EMPLOYMENT RATE FOR 1990 AND THE CHANGE IN LIVING-WAGE EMPLOYMENT BETWEEN 1980-1990

MSA	HIGH-OPPORTUNITY METROS	DECLINING-OPPORTUNITY METROS	LOW-OPPORTUNITY METROS	IMPROVING-OPPORTUNITY METROS
TOTAL	***44***	***8***	***34***	***13***
Akron	--	--	1	--
Albany	1	--	--	--
Albuquerque	--	--	1	--
Allentown	1	--	--	--
Atlanta	1	--	--	--
Augusta	1	--	--	--
Austin	--	--	1	--
Bakersfield	--	--	--	1
Baltimore	--	1	--	--
Baton Rouge	--	--	1	--
Birmingham	--	--	1	--
Boston	1	--	--	--
Bridgeport	1	--	--	--
Buffalo	1	--	--	--
Canton	1	--	--	--
Charleston	--	--	1	--
Charlotte	1	--	--	--
Chattanooga	--	--	1	--
Chicago	1	--	--	--
Cincinnati	1	--	--	--
Cleveland	1	--	--	--
Columbia SC	--	--	--	1
Columbus	1	--	--	--
Dallas	--	--	1	--

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TABLE C-1. TYPOLOGY OF METRO AREAS BY LIVING-WAGE EMPLOYMENT RATE FOR 1990 AND THE CHANGE IN LIVING-WAGE EMPLOYMENT BETWEEN 1980-1990

MSA	HIGH-OPPORTUNITY METROS	DECLINING-OPPORTUNITY METROS	LOW-OPPORTUNITY METROS	IMPROVING-OPPORTUNITY METROS
TOTAL	***44***	***8***	***34***	***13***
Dayton	1	--	--	--
Denver	--	1	--	--
Des Moines	1	--	--	--
Detroit	--	--	1	--
El Paso	--	--	1	--
Ft. Lauderdale	--	--	1	--
Fresno	--	--	1	--
Grand Rapids	1	--	--	--
Greensboro	1	--	--	--
Greenville, SC	--	--	--	1
Harrisburg	1	--	--	--
Hartford	1	--	--	--
Honolulu	--	--	--	1
Houston	--	--	1	--
Indianapolis	1	--	--	--
Jackson	--	--	1	--
Jacksonville	--	--	1	--
Johnson City	--	--	1	--
Kansas City	--	1	--	--
Knoxville	--	--	1	--
Lakeland	--	--	1	--
Lancaster	1	--	--	--
Lansing	1	--	--	--
Las Vegas	1	--	--	--
Little Rock	--	--	1	--
Los Angeles	--	--	1	--
Louisville	--	1	--	--
Melbourne	--	--	--	1
Memphis	--	--	1	--
Miami	--	--	1	--
Milwaukee	1	--	--	--
Minneapolis	1	--	--	--
Mobile	--	--	--	1
Nashville	--	--	--	1
New Haven	1	--	--	--

TABLE C-1. TYPOLOGY OF METRO AREAS BY LIVING-WAGE EMPLOYMENT RATE FOR 1990 AND THE CHANGE IN LIVING-WAGE EMPLOYMENT BETWEEN 1980-1990

MSA	HIGH-OPPORTUNITY METROS	DECLINING-OPPORTUNITY METROS	LOW-OPPORTUNITY METROS	IMPROVING-OPPORTUNITY METROS
TOTAL	***44***	***8***	***34***	***13***
New Orleans	--	--	1	--
New York	1	--	--	--
Norfolk	1	--	--	--
Oklahoma City	--	--	1	--
Omaha	1	--	--	--
Orlando	--	--	--	1
Philadelphia	1	--	--	--
Phoenix	--	--	--	1
Pittsburgh	--	--	1	--
Portland	--	1	--	--
Providence	--	--	1	--
Raleigh	--	--	1	--
Richmond	1	--	--	--
Riverside	--	--	--	1
Rochester	1	--	--	--
Sacramento	--	--	--	1
St. Louis	1	--	--	--
Salt Lake City	--	1	--	--
San Antonio	--	--	1	--
San Diego	--	--	1	--
San Francisco	--	--	1	--
San Jose	--	1	--	--
Scranton	1	--	--	--
Seattle	1	--	--	--
Springfield	1	--	--	--
Stockton	--	--	1	--
Syracuse	1	--	--	--
Tacoma	--	1	--	--
Tampa	--	--	1	--
Toledo	1	--	--	--
Tucson	--	--	1	--
Tulsa	1	--	--	--
Ventura	--	--	--	1
Washington	1	--	--	--
West Palm Beach	--	--	--	1

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TABLE C-1. TYPOLOGY OF METRO AREAS BY LIVING-WAGE EMPLOYMENT RATE FOR 1990 AND THE CHANGE IN LIVING-WAGE EMPLOYMENT BETWEEN 1980-1990				
MSA	HIGH-OPPORTUNITY METROS	DECLINING-OPPORTUNITY METROS	LOW-OPPORTUNITY METROS	IMPROVING-OPPORTUNITY METROS
TOTAL	***44***	***8***	***34***	***13***
Wichita	1	--	--	--
Wilmington	1	--	--	--
Worcester	1	--	--	--
York	1	--	--	--
Youngstown	--	--	1	--

TABLE C-2. TYPOLOGY 2 1990 LIVING-WAGE EMPLOYMENT SHARE BY CHANGE IN LIVING-WAGE EMPLOYMENT SHARE BETWEEN 1980-1990 MEASURES				
MSA	HIGH-OPPORTUNITY METROS	DECLINING-OPPORTUNITY METROS	LOW-OPPORTUNITY METROS	IMPROVING-OPPORTUNITY METROS
AVERAGE	***38***	***19***	***23***	***17***
Akron	--	1	--	--
Albany	--	1	--	--
Albuquerque	--	--	1	--
Allentown	1	--	--	--
Atlanta	--	--	1	--
Augusta	1	--	--	--
Austin	--	--	1	--
Bakersfield	1	--	--	--
Baltimore	--	1	--	--
Baton Rouge	--	1	--	--
Birmingham	--	1	--	--
Boston	--	--	1	--
Bridgeport	1	--	--	--
Buffalo	--	1	--	--
Canton	1	--	--	--
Charleston	--	--	1	--
Charlotte	1	--	--	--
Chattanooga	--	1	--	--
Chicago	1	--	--	--
Cincinnati	1	--	--	--
Cleveland	1	--	--	--

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TABLE C-2. TYPOLOGY 2 1990 LIVING-WAGE EMPLOYMENT SHARE BY CHANGE IN LIVING-WAGE EMPLOYMENT SHARE BETWEEN 1980-1990 MEASURES				
MSA	HIGH-OPPORTUNITY METROS	DECLINING-OPPORTUNITY METROS	LOW-OPPORTUNITY METROS	IMPROVING-OPPORTUNITY METROS
AVERAGE	***38***	***19***	***23***	***17***
Columbia, SC	--	--	--	1
Columbus	1	--	--	--
Dallas	--	--	1	--
Dayton	--	1	--	--
Denver	--	--	1	--
Des Moines	--	--	1	--
Detroit	--	1	--	--
El Paso	--	--	1	--
Ft. Lauderdale	--	--	1	--
Fresno	--	--	--	1
Grand Rapids	--	1	--	--
Greensboro	1	--	--	--
Greenville, SC	--	1	--	--
Harrisburg	1	--	--	--
Hartford	1	--	--	--
Houston	--	--	1	--
Indianapolis	1	--	--	--
Jackson	--	--	1	--
Jacksonville	--	--	1	--
Johnson City	1	--	--	--
Kansas City	--	1	--	--
Knoxville	1	--	--	--
Lakeland	--	1	--	--
Lancaster	1	--	--	--
Lansing	--	--	--	1
Las Vegas	1	--	--	--
Little Rock	--	--	--	1
Los Angeles	--	--	--	1
Louisville	1	--	--	--
Melbourne	--	--	--	1
Memphis	--	1	--	--
Miami	--	--	--	1
Milwaukee	--	1	--	--
Minneapolis	--	--	1	--
Mobile	1	--	--	--

TABLE C-2. TYPOLOGY 2 1990 LIVING-WAGE EMPLOYMENT SHARE BY CHANGE IN LIVING-WAGE EMPLOYMENT SHARE BETWEEN 1980-1990 MEASURES				
MSA	HIGH-OPPORTUNITY METROS	DECLINING-OPPORTUNITY METROS	LOW-OPPORTUNITY METROS	IMPROVING-OPPORTUNITY METROS
AVERAGE	***38***	***19***	***23***	***17***
Nashville	1	--	--	--
New Haven	1	--	--	--
New Orleans	--	--	--	1
New York	1	--	--	--
Norfolk	1	--	--	--
Oklahoma City	--	--	--	1
Omaha	--	--	--	1
Orlando	--	--	--	1
Philadelphia	1	--	--	--
Phoenix	--	--	1	--
Pittsburgh	--	1	--	--
Portland	--	--	1	--
Providence	1	--	--	--
Raleigh	--	--	1	--
Richmond	1	--	--	--
Riverside	1	--	--	--
Rochester	1	--	--	--
Sacramento	--	--	--	1
St. Louis	1	--	--	--
Salt Lake City	--	--	1	--
San Antonio	--	--	1	--
San Diego	--	--	--	1
San Francisco	--	--	1	--
San Jose	--	--	1	--
Seattle	--	--	1	--
Springfield	1	--	--	--
Stockton	--	1	--	--
Syracuse	--	1	--	--
Tacoma	1	--	--	--
Tampa	--	--	--	1
Toledo	--	1	--	--
Tucson	--	--	1	--
Tulsa	1	--	--	--
Ventura	--	--	--	1
Washington	--	--	--	1

TABLE C-2. TYPOLOGY 2 1990 LIVING-WAGE EMPLOYMENT SHARE BY CHANGE IN LIVING-WAGE EMPLOYMENT SHARE BETWEEN 1980-1990 MEASURES				
MSA	HIGH-OPPORTUNITY METROS	DECLINING-OPPORTUNITY METROS	LOW-OPPORTUNITY METROS	IMPROVING-OPPORTUNITY METROS
AVERAGE	***38***	***19***	***23***	***17***
West Palm Beach	--	--	--	1
Wichita	1	--	--	--
Wilmington	1	--	--	--
Worcester	1	--	--	--
York	1	--	--	--
Youngstown	1	--	--	--